Recovery Plan Action Status

Plan Name: Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area

Plan Status: Final Plan Date: 30-Sep-98 Lead Agency: USFWS

Lead Office: Sacramento Fish And Wildlife Office 414-6600)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Bay checkerspot butterfly (Euphydryas editha bayensis), Tiburon mariposa lily (Calochortus iiburonensis), Metcalf Canyon ewelflower (Streptanthus albidus ssp. albidus), Pennell's bird's-beak (Cordylanthus elenuis ssp. capillaris), San Mateo woolly sunflower (Eriophyllum atilobum), Coyote ceanothus (Ceanothus (Ceanothus (Ceanothus ierrisae), White-rayed pentachaeta (Pentachaeta bellidiflora), Presidio clarkia (Cirsium fontinale var. fontinale), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Marin dwarf-flax (Hesperolinon congestum), Tiburon jewelflower (Streptanthus niger), San Mateo thornmint (Acanthomintha obovata ssp. dudtonii), Santa Clara Valley dudleya (Dudleya (Dudleya (Dudleya (Dudleya (Dudleya (Dudleya (Streptanthus dudleya (Dudleya (Dudleya (Streptanthus dudleya (Dudleya (Dudleya (Dudleya (Streptanthus dudleya (Dudleya (Dudleya (Streptanthus dudleya (S	2	1.1	Establish cooperative programs with participants from the public and private sector	Ongoing Not Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, California Department of Fish and Game	Other: Information and Education	Internal Technical Assistance	Cooperative program established with Stuart Weiss and San Mateo Parks for reintroduction of Bay Checkerspot into Edgewood Park.

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Bay checkerspot butterfly	2	1.2.1	Develop and implement outreach	Not Started			U.S. Fish and Wildlife Service	Other: Information and Education	Internal Technical Assistance	
(Euphydryas editha			plans				Wilding Service	and Education	Assistance	
bayensis), Tiburon			piaris							
mariposa lily										
(Calochortus										
tiburonensis), Metcalf Canyon										
ivietcair Canyon										
jewelflower										
(Streptanthus										
albidus ssp.										
albidus), Pennell's										
bird's-beak										
(Cordylanthus										
tenuis ssp.										
capillaris), San										
Mateo woolly										
sunflower										
(Eriophyllum										
latilobum), Coyote										
ceanothus										
(Ceanothus										
ferrisae), White-										
rayed pentachaeta										
(Pentachaeta										
bellidiflora),										
Presidio clarkia										
(Clarkia										
franciscana),										
Fountain thistle										
(Cirsium fontinale										
var. fontinale),										
Tiburon paintbrush										
(Castilleja affinis										
ssp. neglecta),										
Marin dwarf-flax										
(Hesperolinon										
congestum),										
Tiburon jewelflower										
(Streptanthus										
niger), San Mateo										
thornmint										
(Acanthomintha										
obovata ssp.										
duttonii), Santa										
Clara Valley										
dudleya (Dudleya										
setchellii)		1						1	1	

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(Acanthomintha obovata ssp. duttonii), Santa Clara Valley dudleya (Dudleya setchellii)										

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Bay checkerspot butterfly (Euphydryas editha bayensis), Presidio clarkia (Clarkia franciscana)	1	2.1.1	Secure and protect serpentine habitat in the Oakland Hills for multiple species	Not Started			East Bay Regional Park District, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Technical Assistance	

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Presidio clarkia (Clarkia franciscana), Marin dwarf-flax (Hesperolinon congestum)	1	2.1.8	Secure and protect serpentine habitat on the Presidio (San Francisco County) for multiple species	Ongoing Current	FY 1995 - FY 1999		National Park Service, U.S. Fish and Wildlife Service	Management	Internal Field Assistance	2004 Comment: Study of management ongoing. 2011: Introduction of Marin dwarf flax is ongoing at Inspiration Pt on the SF Presidio. Conducted by Presidio Trust and Creekside Center for Earth Observation.
Bay checkerspot butterfly (Euphydryas editha bayensis), Tiburon mariposa lily (Calochortus tiburonensis), Pennell's bird's-beak (Cordylanthus tenuis ssp. capillaris), Coyote ceanothus (Ceanothus (Ceanothus ferrisae), Presidio clarkia (Clarkia franciscana), Fountain thistle (Cirsium fontinale var. fontinale), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Santa Clara Valley dudleya (Dudleya	2	2.2.28	Secure and protect serpentine habitat Northwest of Healdsburg (Sonoma County) for Arctosaphylos bakeri ssp. Bakeri	Not Started			Sonoma County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	

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Bay checkerspot	1	3.1	Develop and	Ongoing Current	FY 1995 - FY 1999		California	Management:	Internal Field	Staff from
butterfly			implement				Department of	General	Assistance	Creekside Center
(Euphydryas editha			appropriate				Parks and			for Earth Observation
bayensis), Tiburon			management				Recreation,			
mariposa lily			actions at multiple				California			working with Santa
(Calochortus			sites, for multiple				Department of			Clara Open Space
tiburonensis),			species				Transportation, City			Authority to
Metcalf Canyon			'				of San Jose,			develop new
jewelflower							California, City of			monitoring protocol
(Streptanthus							Tiburon, California,			for Dudleya
albidus ssp.							East Bay Regional			setchellii.
albidus), Pennell's							Park District, Marin			
bird's-beak							County Open			Invasive plants are
(Cordylanthus							Space District,			being removed
tenuis ssp.							Marin Municipal			from Cirsium
capillaris), San							Water District,			fontinale var.
Mateo woolly							Midpeninsula			fontinale var.
sunflower							Regional Open			populations at
(Eriophyllum						Space District,			Stulsaft Park and	
latilobum), Coyote							Rancho Santa Ana			CalTrans property near Woodside Glens.
							Botanic Garden,			
ceanothus (Ceanothus							San Francisco			
ferrisae), White-							Water Department,			
rayed pentachaeta							Tiburon Landmark			
(Pentachaeta							Society, University			
bellidiflora),							of California at			
Presidio clarkia							Berkeley, San			
(Clarkia							Mateo County,			
franciscana),							California,			
Fountain thistle							Stanislaus County,			
(Cirsium fontinale							California, Marin			
var. fontinale),							County, California,			
Tiburon paintbrush							San Francisco			
(Castilleja affinis							County, California,			
ssp. neglecta),							Santa Clara			
Marin dwarf-flax							County, California,			
(Hesperolinon							Contra Costa			
congestum),							County, California,			
Tiburon jewelflower							Alameda County,			
(Streptanthus						California, Sonoma				
niger), San Mateo						County, California,				
thornmint							National Park			
(Acanthomintha						Service, U.S. Fish				
obovata ssp.						and Wildlife				
duttonii), Santa						Service, California				
Clara Valley						Department of Fish				
dudleya (Dudleya				1		and Game, Private				
setchellii)					1		landowners			

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Presidio clarkia (Clarkia franciscana), Marin dwarf-flax (Hesperolinon congestum)	2	4.2.19	Conduct surveys in historic and potential habitat on the Presidio (San Francisco County) for multiple species	Ongoing Current	FY 1995 - FY 1999		National Park Service, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	

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Bay checkerspot butterfly (Euphydryas editha bayensis), Presidio clarkia (Clarkia franciscana)	2	4.2.5	Conduct surveys in historic and potential habitat in the Oakland Hills (Alameda County) for multiple species	Not Started			East Bay Regional Park District, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	
Presidio clarkia (Clarkia (Fanciscana), Marin dwarf-flax (Hesperolinon congestum)	1	5.15	Conduct necessary research at the Presidio (San Francisco County) for multiple species	Ongoing Current	FY 2007		National Park Service, U.S. Fish and Wildlife Service	Research: Habitat Requirements	Graduate Student	Conducting burn/scrape/tarp studies to benefit Presidio clarkia. Reintroduction efforts for Hesperolinon congestum have begun at Inspiration Pt. on the SF Presidio by Presidio Trust and Creekside Center for Earth Observation.
Presidio clarkia (Clarkia franciscana)	1	5.3	Conduct necessary reaserch at Oakland Hills (Alameda County) for multiple species	Planned	FY 2008		U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Habitat Requirements	Graduate Student	restoration for Clarkia fransicana planned
White-rayed pentachaeta (Pentachaeta (Pentachaeta bellidiflora), Presidio clarkia (Clarkia franciscana), Fountain thistle (Cirsium fontinale var. fontinale), San Mateo thornmint (Acanthomintha obovata ssp. duttonii)	1	6.1.1	Store the seeds from multiple plant taxa	Ongoing Current	FY 2007		San Francisco Water Department, U.S. Fish and Wildlife Service	Research: Genetics	Species Expert	Some Clarkia franciscana seeds collected by UC Berkeley Botanic Garden. Fountain thistle seed collected from 2008 - 2010 has been stored at Rancho Santa Ana Botanic Garden. Some San Mateo thornmint seed is stored at UC Berkeley botanic garden.
										White-rayed pentachaeta seed was collected in 2010.